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| APPLICATION NO.<br>88/854,780 | FILING DATE<br>08/29/96 | FIRST NAMED INVENTOR<br>VORA | ATTORNEY DOCKET NO.<br>V&P 001 |
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MM21/0817

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| EXAMINER<br>CRANE, S |
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| ART UNIT<br>2011 | PAPER NUMBER |
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DATE MAILED: 08/17/98

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

**Advisory Action**Application No.  
**08/654,760**

Applicant(s)

Vera

Examiner

Sara W. Crane

Group Art Unit

2811



## THE PERIOD FOR RESPONSE: [check only a) or b)]

- a) ☐ expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☐ expires either three months from the mailing date of the final rejection, or on the mailing date of this Advisory Action, whichever is later. In no event, however, will the statutory period for the response expire later than six months from the date of the final rejection.

Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a), the proposed response and the appropriate fee. The date on which the response, the petition, and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee. Any extension fee pursuant to 37 CFR 1.17 will be calculated from the date of the originally set shortened statutory period for response or as set forth in b) above.

- ☒ Appellant's Brief is due two months from the date of the Notice of Appeal filed on Jun 12, 1998 (or within any period for response set forth above, whichever is later). See 37 CFR 1.191(d) and 37 CFR 1.192(a).

Applicant's response to the final rejection, filed on Jun 12, 1998 has been considered with the following effect, but is NOT deemed to place the application in condition for allowance:

- ☒ The proposed amendment(s):

☐ will be entered upon filing of a Notice of Appeal and an Appeal Brief.

- ☒ will not be entered because:

- ☒ they raise new issues that would require further consideration and/or search. (See note below).
- ☐ they raise the issue of new matter. (See note below).
- ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal.
- ☐ they present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE: "[O]nly components that are orthogonal to said top surface of said substrate" is an example of a new issue.

- ☐ Applicant's response has overcome the following rejection(s):

- ☐ Newly proposed or amended claims \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment cancelling the non-allowable claims.

- ☒ The affidavit, exhibit or request for reconsideration has been considered but does NOT place the application in condition for allowance because:

see attached

- ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

- ☒ For purposes of Appeal, the status of the claims is as follows (see attached written explanation, if any):

Claims allowed: \_\_\_\_\_

Claims objected to: \_\_\_\_\_

Claims rejected: ~~1-5~~ 1-5

- ☒ The proposed drawing correction filed on 6/15/98 ☒ has ☐ has not been approved by the Examiner.

- ☐ Note the attached Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

- ☐ Other

*Sara W. Crane*  
SARA W. CRANE  
PRIMARY EXAMINER  
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Note that papers submitted after final by Applicant on 6/12/98 and 6/15/98 have not been handled by the PTO according to its "Expedited Procedure for Processing Amendments and Other Responses After Final Rejection" because Applicant did not label the papers as required by MPEP 714.13. See the MPEP section labeled "Expedited Procedure . . . ." Duplicate papers submitted 7/20/98 have been placed in the file.

Applicant argues that the examiner has improperly construed the claim limitation "self aligned" as used in for example claim 1 to describe the floating gate. The claim language has been properly construed under the broadest reasonable interpretation standard required for claim construction by an examiner. MPEP 2111. The examiner has construed the claim limitation "self aligned to not extend laterally beyond edges of said well" to mean that the floating gate does not extend laterally beyond edges of the well. This is the plain meaning of the claim language, and the specification does not provide any clear definition to the contrary. See MPEP 2111.01.

The examiner has also noted that "self aligned" is a processing limitation, which carries weight in a claim drawn to structure *only* to the extent that distinct structure *necessarily* results from the recited process. *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Burden is on Applicant to provide evidence that the process step(s) relied upon for patentability necessarily give rise to distinct structure. Applicant has presented no evidence to provide this showing, and the examiner has therefore given no weight to the claim terminology "self aligned" beyond the plain meaning interpretation noted above.

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Applicant presents attorney arguments to urge that "self aligned" means that the floating gate is made by steps 33 and 34 as described on page 14 of the specification, and that these process steps would give rise to a structure with no poly on any horizontal surface. These arguments are not convincing to the examiner because interpretation of the claim language in this manner would be an improper reading of limitations from the specification into the claims.

Note first of all that the specification does not refer to the floating gate as self aligned. Rather, it is the memory cell itself that is taught as self aligned, not the gate (specification, page 13, line 10).

Also, "self aligned" is a term of art used to describe device structures for which alignment arises in some manner naturally from the processing steps, rather than by a separate alignment step in the process of making. The term is used in the context of vertical channel transistors to indicate that a gate electrode deposited within a groove or trench aligns naturally with source/drain regions at the top and bottom of the groove or trench, because the gate electrode extends along the edge of the groove or trench, without need for any particular gate electrode up/down alignment step. This type of alignment is shown in the prior art of Mori used to reject the claims, although alignment which occurs without a separate alignment step would appear to give rise to identical structure as alignment which occurs with a separate alignment step. (In either case, one ends up with aligned structures.) Because the process limitation of "self aligned" does not give rise to any device structure that is necessarily different or distinct from a process including an alignment step, the limitation would not carry patentable weight. If patentable

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weight were, however, to be given to the limitation, the structure resulting from a processing step of "self alignment" would be indistinguishable from the prior art structure.


Furthermore, the process steps 33 and 34 in the specification do not say anything about removing all poly from horizontal surfaces. Step 34 says merely to etch back from horizontal surfaces, which means to etch *from* a horizontal surface, i.e., straight down, for example. One may or may not end up with all poly removed from horizontal surfaces.

The Declaration of Madhukar Vora, submitted 6/12/98, is not convincing because it discusses advantages of the process disclosed in the specification, such as a small cell size and improved alignment tolerance. The claims are not limited to devices having the noted advantages, however, and no limitations on cell size or alignment tolerance appear to be even recited in the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Crane, whose telephone number is (703) 308-4894.

The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist, whose telephone number is (703) 308-0956.

  
Sara Crane  
Primary Examiner